



StarEye led-unit 12 volt 350 mA IP 67 version

Integrated step down convertor

CONTENT

1 PICTURE	3
1.1 GENERAL.....	3
2 DIMENSIONS.....	4
3 SAFETY INFORMATION	5
3.1 SYMBOLS	5
3.2 PROTECTION FROM ELECTRIC SHOCK.....	6
3.3 PROTECTIONS FROM FIRE AND BURNS.....	6
3.4 PROTECTION FROM INJURY	7
3.5 DISPOSING OF THIS PRODUCT	7
4 PHYSICAL INSTALLATION	8
4.1 UNPACKING.....	8
4.2 LOCATION AND ORIENTATION	8
4.3 MOUNTING.....	8
5 EXTERNAL CONNECTIONS.....	9
5.1 DC POWER AT INPUT	9
6 EMC AND SAFETY REQUIREMENTS.....	10
7 INSTALLATION SETUP	11
7.1 SPECIFICATION.....	11
8 SERVICE AND MAINTENANCE	12
8.1 SAFETY PRECAUTIONS.....	12
8.2 CLEANING.....	12
9 WARRANTY.....	13
9.1 APPLICATION OF WARRANTY	13
9.2 RMA PROCEDURE.....	15
10 USED LIST OF ABBREVIATIONS.....	16

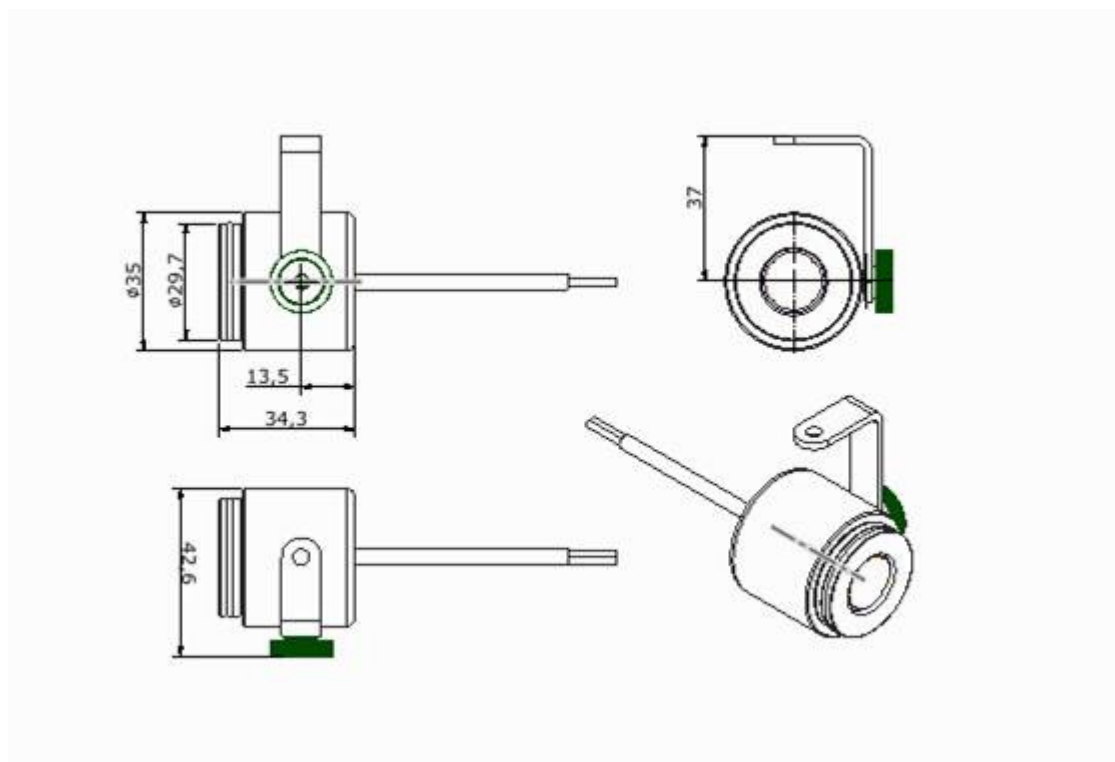
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Picture

1.1 General



Dimensions



Safety information

Before installing, powering up, or servicing the IP 67 StarEye led-unit, it is highly recommended that you read this manual, and you ensure yourself that you completely understand its content. Observe the safety precautions in this manual. Install and operate the led-unit only as described in this manual, and in conformity with local regulations. If you have any questions how to operate this product safely, please contact your point of sale.

3.1 Symbols

Following symbols are used to identify important safety information on the product and in this manual.



DANGER!
Safety hazard. Risk of severe injury or death.



Warning!
Hazardous voltage. Risk of lethal or severe electric shock.



Warning!
LED light emission. Risk of eye injury.



Warning!
Burn hazard. Hot surface. Do not touch



Warning!
Refer to user manual.

3.2 Protection from electric shock



Although this device itself does not operate with dangerous voltages, the installation in which is intended to be used, can contain dangerous voltages.

Shut down the power of the complete installation before carrying out any installation, or maintenance work.

Use only AC to DC power sources, suitable for the application, and conform to local regulations. Please ensure yourself that the AC to DC power supply is able to deliver the rated current requirements of the installation.

If any cable, seal or housing is damaged, cracked, or reformed, disconnect the power of the installation immediately.

For any additional servicing, not described in this manual, please contact your point of sale.

3.3 Protections from fire and burns



Do not operate this led-unit if ambient temperatures, is above 45 °C (113 °F). Please ensure yourself that sufficient ventilation around the led module is possible.

It might be necessary to allow the led-unit to cool down for 5 minutes, before servicing.

Do not modify the led-fixture, in a way, not described in this manual.

3.4 Protection from injury



Ensure yourself that the led-module, and all its accessories are securely fastened. Verify that the led unit is firmly fixed to its supporting underground.

3.5 Disposing of this product



This led-lighting device is manufactured in compliance with directive of the European community: waste electrical and electronically equipment. Please help to preserve our environment, and ensure that this product will be recycled properly at the end of its life.

Physical installation

Thank you for selecting this StarEye led-unit as best solution in your setup.



Warning! Read the safety precautions in this manual before integrating this led-unit into your installation. Installation must be carried out by qualified professionals only.

Assure yourself that there is sufficient and unrestricted air flow around the StarEye led-unit.

4.1 Unpacking

The following items are included in your package:

- Led fixture, complete with focussing bracket.
- Protective antistatic packaging, with short form manual label.

4.2 Location and orientation

This led-unit can be used in all directions.

4.3 Mounting

Surface mounting

The StarEye led-unit can be mounted on all kind of non combustible materials, but take in consideration that the module can have a Tc of approx 30 °C higher as ambient temperature. In case of problems, or doubts, please contact your point of sale.



External connections

5.1 DC power at input

Safety precautions

Never connect the live power on the input terminals of the StarEye led-unit!

In case of doubts, contact your point of sale.

Polarity

The StarEye led-unit is polarity sensitive. So observe polarity and cabling:

- Inner conductor marked with 1 = positive
- Inner conductor marked with 2 = negative

Improper connection, might damage the StarEye led-unit and power supply permanently. In case of inversed polarity, the warranty is void.

Power supply: Rated voltage

The rated input voltage range of the Star-eye led spot is 12V DC. Due to the use of a step down-converctor, integrated in the housing, a highly efficient system is created.

Cable

Please ensure yourself that the cable end is watertight sealed at the connection. If this is not properly done, water can pass through the inner conductors of the cable and damage the internal electronics of the StarEye led-unit.

EMC and safety requirements

The StarEye led-unit is fully compliant to the LVD and EMC directive of the European council, if used in a properly designed setup.

EMC requirements of the power supply

The StarEye led-unit is only intended to be used in lighting applications, and as such, the complete assembly of led unit and power supply needs to be fully compliant with the harmonized standards.

Immunity according to:

- EN 61547:2009 (General EMC immunity requirements lighting eq.)
- EN 61000-4-1:2006 (General immunity testing techniques)
- EN 61000-4-2:2008 (ESD immunity test)
- EN 61000-4-3:2006 + A1:2007 (Radiated immunity test)
- EN 61000-4-4:2004 (Fast transients and burst immunity)
- EN 61000-4-5:2005 (Surge immunity test)
- EN 61000-4-6:2008 (Conducted immunity test)
- EN 61000-4-8:1993 (Magnetic field immunity test)
- EN 61000-4-11:2004 (Voltage variations immunity test)
- EN 61000-6-1:2005 (Generic standards for immunity)

Emission according to:

- EN 61000-3-2:2005+A1:2008+A2:2009 (Harmonics emission test < 16A)
- EN 61000-3-3:2008 (Flicker+ voltage changes limits < 16A)
- EN 55015:2006+A2:2009 (Conducted + radiated emission lighting equipment)

To achieve this compliance, a proper power supply must be supplied. In case of doubts, contact your point of sale.

LVD requirements of the power supply

The StarEye led-unit is only intended to be used in lighting applications, and as such, the complete assembly of led unit and power supply needs to be fully compliant with following harmonized standards:

- EN 60598: general requirements of lighting equipment.

Installation setup

7.1 Specification

The StarEye led-unit is a small and efficient solution for outdoor detail lighting.

It uses a simple stabilized DC power supply of 12V DC.

It is possible to use a selection of accessories to manipulate the light output, like louvers, glare-controllers etc...

- Power consumption: max. 1,5 watt
- Power voltage: 12 volt
- Current: max. 120 mA (full rated output)
- Weight: 85 gr
- Different lenses are possible:
 - FWHM 6.5°
 - FWHM 15°
 - FWHM 20°
 - FWHM 17° x 7°
- Different colors are possible:
 - Warm white, 2700K CRI = 80, Efficacy 80lm/watt
 - Neutral white, 4000K CRI = 75, Efficacy 100 lm/watt
 - Cold white, 6500K CRI=75, Efficacy 130lm/watt

The ingress protection of the StarEye led-unit is IP 67, although the unit is designed to be used in outdoor applications, the IP 67 StarEye may be used indoor as well.

The dimensions of the main led housing is a cylindrical aluminum lathed part of 35mm diameter with length of max. 35 mm. The height with bracket is max. 55 mm. The housing is anodized in black or aluminum-silver natural. Adapters for track lighting are available. The StarEye led-unit is polarity sensitive.

Service and maintenance

8.1 Safety precautions



Read carefully the safety information in this manual. Lock out the power on the entire system and allow all electronic devices to discharge, and cool down, before executing any service or maintenance.

8.2 Cleaning

The StarEye led-unit itself

Extensive dirt, and particle build-up degrades performance, may cause overheating can result in damaged led-unit, and power supply's. Damage by inadequate cleaning or maintenance is not covered by the product warranty.



Never use solvents to clean the outer housing of the unit.

Never use water, or wet cloth.

Warranty

9.1 Application of warranty

Warranty period

Warranty service is valid for one year from the date of purchase by the consumer, as evidenced by invoice date given out by your point of sale.

Warranty service

Service under warranty can only be done by Lux Lumen.

Coördinaties:

Lux Lumen
Kernenergiestraat 53 A
2610 Wilrijk
Belgium

Any cost of secure transportation of the product to and from Lux Lumen service department, will be borne by the customer.

Limitations

Lux Lumen will not warrant the following:

- Periodic check-ups, maintenance and repair or replacement of parts due to normal wear and tear.
- Consumables
- Any software
- Defects caused by modifications carried out without Lux Lumen's approval.
- Damage resulting from the fact that a product is not conforming to country specific standards or specifications in another country than the country of purchase.

Costs incurred by Lux Lumen's service center in making any adoptions or modifications of a product necessary for country specific technical or safety standards or specifications, or any other cost to adjust the product as a result of any specifications which have changed since the delivery of the product.

Warranty service is excluded if damage or defects have been caused by:

Improper use, extensive use, handling or operation of the product as referred to in the user manual or operator manual and/or relevant user documents, including without limitation, incorrect storage, dropping, excessive shocks, corrosions, dirt, water, or sand damage, if the product is not rated to be used in severe conditions, indicated by its IP and IK degree, mentioned in the product specifications in this manual.

Repairs, modifications or cleaning carried out by a non Lux Lumen service centre.

Use of spare parts, software or consumables, which are not compatible with the product.

Connecting the product to equipment not intended to be used with this product.

Defects caused by improper condition of the power supply network.

Inadequate packaging of the product when returning it under the RMA procedure.

Accidents or disasters or any cause beyond the control of Lux Lumen, including but not limited to lightning, water, fire, public disturbances, improper ventilation, and acts of god.

Others

It is the responsibility of the customer to backup and save any software files and programs before repair and to restore the same after such repair.

This warranty does not affect the consumer's statutory rights under applicable national legislation in force, nor the consumer's rights against the retailer arising from the sales/purchase contract. In the absence of applicable national legislation, this warranty will be the consumer's sole and exclusive remedy, and Lux Lumen cannot be liable for any incidental or consequential damages for breach of any express or implied warranty of this product.

For full details of the warranty offered on this product, please contact Lux Lumen's service center.

9.2 RMA procedure

To send material back to Lux Lumen, you need a RMA (Return Material Authorization) document that you will receive from Lux Lumen.

Without the RMA document, we cannot accept the material.

The procedure to obtain a RMA:

Step1:

Customer contacts Lux Lumen about warranty, defects if material has to be returned.

Step2:

Lux Lumen sends the customer a filled out RMA document (using a unique RMA number)

Step3:

Customer sends material (include a copy of the RMA document with the material)

Step 4:

Lux Lumen evaluates the problem, and informs the client if repair is done under warranty, or makes an offer to the client for repair.

Step 5:

The procedure related to lux lumen quality procedures, according ISO 9001 is started up.

Used list of abbreviations

- AC: Alternating current
- DC: Direct current
- °F: Temperature in degrees Fahrenheit
- °C: Temperature in degrees Celsius
- LED: Light Emitting Diode